All observations were made through a 500 mm telephoto lens, and a 10 × 50 field glasses.

163, Domlur Layout, SATISH S. MENON
Bangalore 560 007,
June 22, 1974.

7. CROW-PHEASANT AND FINCH-LARKS

Last summer, while observing partridges with their broods I happened to see a crow-pheasant sitting on the ground and ducking its head to escape the insistent aerial attacks of a female finch-lark. The crow-pheasant had something in its bill and finch-lark was trying to rout the intruder.

When I moved towards them, the crow-pheasant flew away with its morsel followed by the finch-lark in hot pursuit.

Nearing the spot. I saw a fresh nest on the ground, with a dead, partially plucked male finch-lark lying in it. It had a gaping wound on its head through which the brain was bulging out. By its side there was a lifeless nestling.

A. J. College, A. J. T. JOHNSINGH
Sivakasi,
August 2, 1974.

8. A NOTE ON THE SWIFTLETS (*COLLOCALIA*) FOUND IN BURMA

The systematics of this group have for a long time been confused, because morphological differences between species are unobtrusive and, in extreme cases, may even be undetectable. The review by Lord Medway ("Field characters as a guide to the specific relations of swiftlets". *Proc. Linn. Soc. London* 177, 2:151-172. 1966) and earlier papers by the same author have cleared up most of the problems in the group. The account given in THE BIRDS OF BURMA 2nd edition (1953) is now out of date, and needs to be revised as indicated below.

Two characters of the living bird, not normally available to the museum worker, have proved of great taxonomic value.

The first is the ability to orientate acoustically by means of echo-location. When in flight in darkness or poor light those species possessing the faculty utter a penetrating rattle-like call, composed of an irregular succession of brief clicks, invariably audible to man. *C. esculenta* does not utter this call, but all the other Burmese species probably do,

though this still has to be positively recorded for most of the subspecies involved.

The second character is the type of nest built. Swiftlets characteristically build a 'bracket-shaped' nest, in the form of a hanging half-cup in which extraneous nest material is held together by a more or less copious application of 'nest-cement' produced by the bird's own salivary glands. Three main types of nest are built: the 'vegetable' or 'mossy' nest, the 'white' nest, and the 'black' nest: and these are described in more detail below. In different parts of south-east Asia all three types may be commercially exploited as a source of raw material of 'bird's nest soup', the chief constituent of which is the edible nest-cement; but it is the 'white' nest, requiring minimal cleaning and preparation before being cooked, that is by far the most valuable. In Burma this is made only by the species *fuciphaga* in the Mergui Archipelago.

Himalayan Swiftlet

Collocalia brevirostris (McClelland), Assam

Subspecies: *brevirostris* (McClelland), Assam
rogersi Deignan, Thailand

IDENTIFICATION A large swiftlet, wing 123-142 mm. Tarsus lightly feathered or unfeathered. Tail markedly forked: the difference in length between the long outer feathers and the short central ones generally exceeds 15 per cent of the length of the former. In the nominate race the rump is brownish-grey, clearly differentiated from the blackish-brown of the rump and mantle. The rattle call is probably uttered, but so far positively recorded only for the Javan subspecies.

NEST AND EGGS Livesey found the subspecies *rogersi* breeding in great numbers in the Shan States in deep fissures in the ground, generally in the dip between hilltops at about 4,000 feet. Two eggs were taken on 23rd April. The nest has not been described from Burma, but in the Himalayas and Sumatra is of the vegetable type.

STATUS AND DISTRIBUTION Himalayas, Burma, Thailand, Indochina, south-central and western China; also resident in Java and Sumatra, but only a winter visitor in Malaya. A bird of the higher hills, normally breeding from 4,000 feet upwards. Large flocks have been seen at Gangfang in the Ngawchang valley from November to March, usually at dusk, and breeding in the locality is suspected; also seen in the Adung valley at 8,000 feet in February and March. In four successive years large numbers appeared over Myitkyina in mid-February during spells of cold weather with heavy rain. Odd birds have been seen in July and August.

It is possible that at least some of these birds belonged to the subspecies *innominata* Hume, believed to breed in China and migrate southwards and westwards in winter, reaching the Andamans (whence the type specimen came) as a straggler; but it is very difficult to distinguish from subspecies *brevirostris* even in the hand (vide Sálim and Ripley, HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN, Vol. *4*, p. 28), and there is no definite record from Burma to date.

Black-nest Swiftlet

Collocalia maxima Hume, Tenasserim (= *lowi*)
Subspecies *maxima* Hume, Tenasserim

IDENTIFICATION A large swiftlet, wing 122-136 mm; tarsus heavily feathered with a distinct row of at least 6 or 7 small feathers on the outer side and a second row of at least 4 small feathers on the inner side; tail more or less square, difference in length between the long outer pair of feathers and the short central pair normally does not exceed 12 per cent of the length of the former, Rump colour variable. Rattle-call proved for several supspecies and probably uttered by all. NEST AND EGGS The nest is of the 'black' type, bracket-shaped, incorporating feathers from all parts of the plumage of the swiftlets, and held together by a firm translucent nest-cement without the inclusion of any vegetable materials. For breeding in the Mergui Archipelago see under next species.

STATUS AND DISTRIBUTION Eastern Himalayas to the Philippines and south to Sumatra, Java and Borneo. Sympatric with *brevirostris* except in Borneo where the latter is absent.

Edible-nest Swiftlet

Collocalia fuciphaga (Thunberg), Java
Subspecies: *germani* Oustalet, Pulau Condore
inexpectata Hume, Andaman Is.

LOCAL NAME Burmese: *zi-we-so*

IDENTIFICATION A medium-sized swiftlet, wing 110-125 mm, rump paler than back and tail and marked with dark shaft stripes. In the plumage of the back there are always white tips to at least some of the concealed downy barbs at the bases of the feathers. Rattle-call proved for *germani*.

NESTS AND EGGS The nest is of the 'white' type, constructed almost exclusively of concentric laminae of firm nest-cement; in most nests a few small swiftlet feathers are found adhering to and partially incorporated in the cup. In the Mergui Archipelago the collection of nests

is controlled by the Forest Department under licence. Hopwood (in THE BIRDS OF THE MALAY PENINSULA Vol. IV, pp. 115-116) describes nesting in the Mali Islands off the coast of Tenasserim. The nest measures 2-3 inches across and 1 inch deep, and appears to be made of silvery-white gelatine, though second nests usually contain more feathers than first nests. *C. maxima* (he calls it *C. innominata*) nests in the same caves and is the earlier breeder of the two, plastering its nests at random anywhere above high-water mark from February, a few eggs being laid in the first week of March; whereas *germani* always goes to the top of the cave and does not lay until well on in April. The nest-collectors take the nests of both species. The eggs are 2 in number.

STATUS AND DISTRIBUTION Widespread in S.E. Asia, extending to the Marianas (but not in the Indian Ocean, e.g. Mauritius, where the species is *francica*). It has been obtained on islands off the coast west of Bassein, and is common on the Tenasserim coast and in the Mergui Archipelago; the subspecies *inexpectata* has been obtained once in Tenasserim.

WHITE-BELLIED SWIFTLET

Collocalia esculenta Linnaeus, Amboina
Subspecies: *elachyptera* Oberholser, Bentinck Is.

IDENTIFICATION Characterized by small size (wing not exceeding 107 mm) and by generally blackish upper-parts strongly glossed with blue or green, and much white on the abdomen. None of the subspecies is known to utter the rattle-call.

NESTS AND EGGS Not described from Burma. Normally the self-supporting bracket-shaped nest is of the 'vegetable' type, in which a firm translucent nest-cement is applied in the form of a network of fine threads to bind together the material of the nest cup, and is copious at the hinge. The vegetable materials of which the nest cup is constructed may be very diverse.

STATUS AND DISTRIBUTION From the Mergui Archipelago through Malaysia to New Caledonia.

B. E. SMYTHIES
C/o. WESTMINISTER BANK LTD.,
40, QUEEN'S ROAD,
CLIFTON, BRISTOL, U.K.,
November 29, 1974.

Note by U Tun Yin, dated 9 May 1974

Launglon Co-operative Society in 1971-72, 350 viss (572040.0 gm), of edible nests were collected by U Tun Yin. All these were taken over by Trade Cor-

poration, No. 2 (Water Products). The nests are classified into four categories, the price fixed for each being as follows:-

No. 1 — Kyats 800.00 per viss.
No. 2 — Kyats 700.00 per viss.
No. 3 — Kyats 550.00 per viss.
No. 4 — Kyats 350.00 per viss.

Nests collected prior to 1971-72 under licence were as follows:-

1966-67 — 526 viss = 859694.4 gm
1967-68 — 338 viss = 552427.2 gm
1968-69 — 328 viss = 536083.2 gm
1969-70 — 289 viss = 472341.6 gm
1970-71 — 432 viss = 706060.8 gm
1 viss = 1634.4 gm
1 kyat = *c.* Rs. 1.35 (Indian currency as on 1974).

9. NOTES ON THE EGG TEETH OF THE HOUSE SWIFT

The egg tooth of birds is an integumentally derived tooth-like protuberance or horny tubercle usually found near the distal end of the upper mandible at the time of hatching. It is generally believed to function "in cutting through shell membranes and shell at hatching" (Clark 1961). A variety of supplementary tooth-like structures have been noted on the lower mandible; a single egg tooth restricted to the lower mandible has been reported for several families of birds.. In some groups of birds the egg tooth is decidedly deciduous and is quickly lost, while in others it gradually disappears without falling off. The presence, distribution and timing of egg teeth in birds have been reviewed by Clark (1961) and Parkes & Clark (1964). Even so, only fragmentary data exist for the order Apodiformes and this is confined to observations of a few swifts of the family Apodidae. We present here more detailed observations of the egg teeth of the House Swift, *Apus affinis.*

Observations were made of an aged series of preserved young as well as of numerous living nestlings of a wide variety of ages examined as part of a study of the post-hatching development of the House Swift. All of the nest sites were in the vicinity of Baroda, Gujarat, India. Newly hatched young House Swifts have what appears to be a typical egg tooth near the distal end of the dorsal surface of the upper mandible. It is whitish in colour and stands out against the mandible which becomes appreciably darker during the first week of post-hatching development. This egg tooth gradually becomes darker and less conspicuous until it finally disappears by the time the nestling is 13 or 14 days old. A second tooth-like structure is present on the lower mandible in the form of a hardened cap to the tip. This protruding structure is noticeably